

**EXHIBIT 6 (Part 7)**  
**Deposition of David Repka (Redacted)**  
**Dated 2/28/2020**  
**With Deposition Exhibit**  
**129 Con't**

This would allow for increased transparency and openness in the decommissioning process.

In addition, the NRC receives frequent questions and concerns from various stakeholders about what reactor SSCs are needed for spent fuel management before and at the time of PSDAR submittal and throughout the decommissioning process. Aligning the development of, and public notification and comment on, the IFMP and PSDAR would allow licensees, the NRC, and all stakeholders to better understand those reactor SSCs, if any, that are needed for spent fuel management before they are decommissioned and would improve efficiency of communications with respect to those issues.

The NRC also proposes removing the requirement in § 50.82(a)(4)(i) for the site-specific decommissioning cost estimate submitted with the PSDAR to include the projected cost of managing irradiated fuel. Because the submittal of the IFMP, which specifically includes the projected cost of managing irradiated fuel, will be linked to the submittal of the PSDAR, this projected cost information need not be duplicated in the site-specific decommissioning cost estimate submitted with the PSDAR.

To align the level of NRC review for the PSDAR and IFMP, the NRC proposes to remove § 50.54(bb)'s "preliminary approval" and final NRC review, "as part of any proceeding for continued licensing under 10 CFR part 50 or 10 CFR part 72," of the IFMP. Approval of the IFMP would not be required, just as NRC approval of the PSDAR is not required. In the final rule adopting § 50.54(bb), "Requirements for Licensee Actions Regarding the Disposition of Spent Fuel Upon Expiration of Reactor Operating Licenses" (49 FR 34688; August 31, 1984) (1984 Final Rule), the NRC stated that the IFMP submitted under § 50.54(bb) is part of an information-gathering process that is used by the NRC in determining if it needs to take any further action. The NRC's review

focuses on identification of discrepancies or omissions and its "preliminary approval" signifies that, based on the information available at the time of filing of the IFMP, the licensee's spent fuel management plans are sound and will provide adequate protection of the public health and safety and the environment. In addition, NRC "preliminary approval" is not a defined process in the current regulatory framework.

The review and "preliminary approval" of the IFMP is similar to the review that the NRC conducts for the PSDAR. The requirements in § 50.82(a)(4) address what information is to be included in the PSDAR submittal. The NRC assesses each PSDAR to determine whether the information in the PSDAR is consistent with the requirements in the decommissioning regulations. If the NRC identifies any deficiencies in the PSDAR, the NRC requests additional information from the licensee. The NRC reviews the additional information from the licensee to ensure that the updated information meets the regulatory requirements for PSDAR content. As necessary, the NRC addresses any further deficiencies with the licensee in subsequent interactions, including additional letters, public meetings, or onsite inspections. Because the IFMP is a planning document like the PSDAR, and the NRC can address any deficiencies in the IFMP with the licensee through its oversight just as the NRC does with the PSDAR, the NRC proposes to align its review of the IFMP with its review of the PSDAR and not require approval of the IFMP.

With regard to NRC's final review of the IFMP "as part of any proceeding for continued licensing under 10 CFR part 50 or 10 CFR part 72," these proceedings no longer exist as they did when § 50.54(bb) was first promulgated in 1984. In the 1984 Final Rule, the Commission discussed the "proceeding for continued licensing under part 50" as the pre-1996 reactor decommissioning process, where licensees were required to submit a license amendment request for approval of the decommissioning



plan and to change the license from an operating license to a possession-only license before licensees could begin decommissioning. The NRC noted in the 1984 Final Rule that the IFMP would become part of the conditions of an amended 10 CFR part 50 license for a shutdown reactor facility. After the 1996 rulemaking, the NRC no longer requires submittal of a license amendment when a reactor ceases operations, and thus, there is no longer a "proceeding for continued licensing under part 50" for the NRC to review and approve the IFMP.

The 1984 Final Rule discusses the "proceeding for continued licensing under part 72" as the application for, and NRC issuance of, a 10 CFR part 72 specific license for storage of spent fuel in an ISFSI. The 1984 issuance of § 50.54(bb) preceded the general license ISFSI provisions, which were added to 10 CFR part 72 in 1990. Regarding the 10 CFR part 72 general license, storage of spent fuel in a general license ISFSI is authorized by operation of law via § 72.210, so there is no NRC "licensing proceeding" or approval needed for the 10 CFR part 72 general license. As most reactor licensees use the 10 CFR part 72 general license for storage of spent fuel in an ISFSI, there would be no "proceeding for continued licensing under part 72" for the NRC to review and approve the IFMP.

#### **Requirements in § 72.218 for termination of the general license for spent fuel storage**

Because the current spent fuel management planning provisions of § 72.218 are initiated by reactor shutdown and are related to reactor decommissioning, the requirements fit best in 10 CFR part 50 and are not necessarily needed in 10 CFR part 72. Therefore, as the NRC proposes adding the spent fuel management provisions from § 72.218 into § 50.54(bb), the NRC also proposes deleting those

provisions from § 72.218. In addition, the NRC proposes revising § 72.218 to address requirements related to termination of the 10 CFR part 72 general license, as the current title of § 72.218, "Termination of licenses," suggests.

The 10 CFR part 72 general license is issued to 10 CFR part 50 or 10 CFR part 52 licensees, per the regulation in § 72.210. It follows that the 10 CFR part 72 general license would terminate coincident with the termination of the 10 CFR part 50 or 10 CFR part 52 license. In addition, since the general license ISFSI is part of the 10 CFR part 50 or 10 CFR part 52 licensed site, decommissioning of the general license ISFSI would follow the reactor decommissioning process in § 50.82 or § 52.110, respectively. This approach would also be consistent with the NRC's approach to ISFSI decommissioning funding as discussed in the "*Decommissioning Funding Assurance*" section of this document.

However, to provide regulatory clarity between 10 CFR parts 50, 52, and 72 in terms of decommissioning and termination of the 10 CFR part 72 general license, the NRC proposes to revise § 72.218 to include the following provisions: (1) the general license ISFSI must be decommissioned consistent with the requirements in § 50.82 or § 52.110; and (2) the general license is terminated upon termination of the 10 CFR part 50 or 10 CFR part 52 license. This proposed change would provide regulatory clarity among 10 CFR parts 50, 52, and 72 in terms of decommissioning and termination of the 10 CFR part 72 general license, analogous to the provision in § 72.210 that ties the issuance of the 10 CFR part 72 general license to the existence of the 10 CFR part 50 or 10 CFR part 52 license.

#### **L. Backfit Rule**

For nuclear power reactor licensees, the NRC's backfitting provisions are located in § 50.109, "Backfitting," and the issue finality provisions are in 10 CFR part 52 (hereinafter collectively referred to as the "Backfit Rule"). The language of the Backfit Rule clearly applies to a licensee designing, constructing, or operating a nuclear power facility. For example, § 50.109(a)(1) defines "backfitting" to mean changes to, among other things, the procedures or organization required to design, construct or operate a facility. The application of the Backfit Rule to decommissioning plants is not as clear. In SECY-98-253, "Applicability of Plant-Specific Backfit Requirements to Plants Undergoing Decommissioning," dated November 4, 1998 (ADAMS Accession No. ML992870107), the NRC staff presented the Commission with a list of reasons underlying this uncertainty:

- The Backfit Rule has no end point when the rule no longer applies, "thereby implying that backfit protection continues into decommissioning and up to the point of license termination."
- The term "operate" could reasonably be interpreted as including activities to decommission the reactor.
- The Backfit Rule was developed when the decommissioning of plants was not an active area of regulatory concern.
- The Backfit Rule's definition of "backfitting" uses terms associated with the design, construction, and operation of a facility rather than with its decommissioning, although the staff noted in SECY-98-253 that "prior to the 1996 decommissioning rule, the Commission regarded decommissioning as a phase of the plant's life cycle which is different from the operational phase."



- Two of the factors used in evaluating a backfit—costs of construction delay/facility downtime, and changes in plant/operational complexity—are targeted to power operation and are “conceptually inappropriate in evaluating the impacts of a backfit on a decommissioning plant.”
- The SOC for the 1970 (35 FR 5317; March 31, 1970), 1985 (50 FR 38097; September 20, 1985), and 1988 (53 FR 20603; June 6, 1988) final Backfit Rules did not discuss any aspect of decommissioning, focusing instead on construction and operation.
- Proposed changes to decommissioning requirements usually focused on relaxing a requirement or on whether a requirement applicable to an operating reactor continued to be applicable to a decommissioning plant. Thus, “the notion of a ‘substantial increase’ in protection to public health and safety from a backfit does not appear to be particularly useful [in decommissioning].”
- The 1996 Final Rule did not directly respond to questions from the public on the applicability of the Backfit Rule to a decommissioning plant.

Over the years, the NRC has tried to clarify the applicability of the Backfit Rule to power reactor licensees in decommissioning. In SECY-98-253, the NRC staff requested Commission approval to amend § 50.109, among other regulations, so that the Backfit Rule would clearly apply to licensees in decommissioning. In that paper, the NRC staff also proposed that, until the rulemaking was finished, the staff would apply the Backfit Rule to plants undergoing decommissioning “to the extent practical.”

In the February 12, 1999, SRM for SECY-98-253 (ADAMS Accession No. ML003753746), the Commission approved development of a Backfit Rule for plants undergoing decommissioning. The Commission directed the NRC staff to continue to apply the then-current Backfit Rule to plants undergoing decommissioning until issuance

of the final rule. The Commission directed the staff to develop a rulemaking plan, which the staff transmitted to the Commission in SECY-00-0145. In SECY-00-0145, the NRC staff proposed, among other decommissioning-related amendments to its regulations, amendments to § 50.109 to show clearly that the Backfit Rule applies during decommissioning and to remove factors that are not applicable to nuclear power plants in decommissioning. As explained in the section titled "*Actions Leading to this 2018 Proposed Rule*" in this document, the NRC ultimately did not conduct that rulemaking. Therefore, the NRC has continued to apply the Backfit Rule to licensee facilities undergoing decommissioning to the extent practical.

In addition to the Commission direction to clarify the application of the Backfit Rule for decommissioning power reactor licensees, the NRC's regulatory framework also supports application of the Backfit Rule to power reactor licensees in decommissioning. Under sections 101 and 103a. of the AEA (42 U.S.C. 2131 and 2133a.), the NRC's issuance of a power reactor operating license under 10 CFR part 50 or a combined license under 10 CFR part 52 grants the holder a license to, among other things, own, possess, and operate a "production facility" or "utilization facility," as those terms are defined in section 11 of the AEA. Once the licensee under 10 CFR part 50 or 10 CFR part 52 submits its certifications of permanent cessation of reactor operations and permanent removal of fuel from the reactor vessel and the NRC docket those certifications, the licensee is no longer authorized to operate the reactor under § 50.82(a)(2) or § 52.110(b), respectively. The license is no longer an "operating license" for the reactor because the licensee is not operating a production or utilization facility pursuant to sections 101 and 103a. of the AEA. Instead, as described in § 50.51(b) for 10 CFR part 50 licenses and § 52.109, "Continuation of combined license," for 10 CFR part 52 combined licenses, when the reactor has permanently



ceased operations, the license continues in effect beyond the expiration date and authorizes ownership and possession of the facility until the Commission terminates the license. Thus, when the licensee is no longer authorized to operate the reactor, it retains its possession and ownership authority under its 10 CFR part 50 or 10 CFR part 52 facility license.

Although a decommissioning licensee's license no longer authorizes operation of the reactor because the licensee is not operating a production or utilization facility, the licensee still must "operate" certain SSCs at the site. Under § 50.51(b) (with a similar requirement in § 52.109 for combined license holders), when the licensee has only a possession and ownership license for the reactor, the licensee must not only decommission and decontaminate the facility, but also continue to maintain the facility, including storing, controlling and maintaining the spent fuel in a safe condition. Therefore, power reactor licensees store, control, and maintain spent fuel after permanent cessation of reactor operations through the "operation" of an SFP and ISFSI.

Although § 50.109(a)(1) defines "backfitting" as changes to, among other things, the procedures or organization required to design, construct, or operate a facility, indicating that the Backfit Rule applies only to a holder of a license to "operate a facility," the language of § 50.51(b) shows that "operating a facility" can be interpreted to mean more than just operating a reactor. This is supported by the Commission direction in the SRM for SECY-98-253 that the NRC staff develop a Backfit Rule for plants undergoing decommissioning (i.e., when the licensee no longer operates a reactor) and continue to apply the then-current Backfit Rule to plants undergoing decommissioning until issuance of the final rule. Thus, the Backfit Rule still applies to a licensee that has a license to only possess and own a facility. For a facility in decommissioning, the phrase "operate a

facility" in § 50.109(a)(1) is read to encompass operating the SFP and associated SSCs necessary for compliance with § 50.51(b).

As the Commission and the NRC staff recognized in the 1990s, certain provisions of the Backfit Rule do not clearly apply to power reactor licensees in decommissioning. Currently, guidance in Management Directive 8.4, "Management of Facility-Specific Backfitting and Information Collection," dated October 9, 2013 (ADAMS Accession No. ML12059A460), provides only that the Backfit Rule applies to decommissioning plants. In this proposed rule, the NRC proposes to complete the process begun two decades ago to clarify the application of the Backfit Rule to power reactor licensees in decommissioning.

The NRC proposes to amend § 50.109 so that power reactor licensees, which have had their § 50.82(a)(1) or § 52.110(a) certifications docketed by the NRC, are the subject of similar backfitting provisions as they were during their operating phase. A new backfitting provision for licensees in decommissioning would eliminate any confusion with the meaning of the words "operate a facility" in § 50.109(a)(1), as compared to other uses of the term "operate" in 10 CFR Chapter I. The current § 50.109 would be limited to licensees of operating reactors, and the new provision would be limited to licensees in decommissioning.

The NRC would make other revisions to § 50.109. To make the section easier to read, the NRC proposes to insert paragraph headings. The NRC would remove current § 50.109(b) regarding backfits imposed prior to October 21, 1985, because the language is obsolete and no longer needed. In the current § 50.109(a)(6), the NRC proposes to insert a sentence explaining that a documented evaluation, which is used by the NRC to justify not performing a backfit analysis, must include a consideration of the costs of imposing the backfit if the basis for backfitting is bringing a facility into compliance with a



license or the rules or orders of the Commission, or into conformance with the licensee's written commitments. The Commission provided this direction to the NRC staff in its November 29, 2016, SRM-COMSECY-16-0020 (ADAMS Accession No. ML16334A462).

#### **M. Foreign Ownership, Control, or Domination**

The NRC is proposing to amend its regulations to address the circumstances when a facility licensed under 10 CFR part 50 or 10 CFR part 52 no longer meets the definition of a utilization facility or a production facility. The AEA has certain requirements specific to utilization or production facilities. By clarifying when a 10 CFR part 50 or 10 CFR part 52 licensed facility is no longer a utilization or a production facility, the NRC can then specify whether these AEA requirements still apply to the licensee for that facility. For instance, the AEA prohibits the issuance of a license for a utilization or a production facility to an entity that the Commission knows or has reason to believe is foreign owned, controlled, or dominated. The Commission's regulations that implement this prohibition, however, are unclear as to whether the prohibition also applies to the acquisition of a 10 CFR part 50 or 10 CFR part 52 license for a facility that is no longer a utilization or a production facility. Therefore, licensees have requested exemptions from § 50.38, "Ineligibility of certain applicants," to transfer 10 CFR part 50 licenses for facilities that no longer meet the definition of utilization facility. The NRC proposes to amend its regulations to clarify that the statutory prohibition only applies to production or utilization facilities, which would eliminate the need for any related exemption requests.

The NRC's regulations in 10 CFR parts 50 and 52 provide for the issuance of a 10 CFR part 50 license for a utilization or a production facility and a 10 CFR part 52 license for a utilization facility. The AEA defines "utilization facility" as:



(1) any equipment or device, except an atomic weapon, determined by rule of the Commission to be capable of making use of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public, or peculiarly adapted for making use of atomic energy in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or device as determined by the Commission.

The AEA defines "production facility," in part, as:

(1) any equipment or device determined by rule of the Commission to be capable of the production of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or device as determined by the Commission.

As authorized by the AEA, the Commission has issued in its regulations specific definitions for utilization facility and production facility. In § 50.2, a utilization facility is defined generally as a nuclear reactor, which is defined as any apparatus other than an atomic weapon, designed or used to sustain nuclear fission in a self-supporting chain reaction. A production facility is defined as a nuclear reactor designed or used primarily for the formation of plutonium or uranium-233; with certain exceptions not relevant here, a facility designed or used for the separation of the isotopes of plutonium; or, with certain exceptions not relevant here, a facility designed or used for the processing of irradiated materials containing special nuclear material.

NRC case law provides insight as to when a facility licensed under 10 CFR part 50 or 10 CFR part 52 is no longer a utilization or a production facility. In LBP-84-33, *Cincinnati Gas & Electric Co.* (Wm. H. Zimmer Nuclear Power Station, Unit 1), 20 NRC 765 (1984), an Atomic Safety and Licensing Board granted the licensee's motion to withdraw its application for a 10 CFR part 50 operating license for a nuclear power reactor, despite the fact that the facility was almost completely built. One

of the conditions for granting the motion was that the nuclear steam supply system be modified to prevent the facility's operation as a utilization facility. The Board determined that because a utilization facility under the AEA is a facility that is capable of making use of special nuclear material, the facility must be modified to eliminate that capability for it to no longer be categorized as a utilization facility. The Board observed that this can be achieved, for example, by severing and welding caps on main feedwater lines and main steam lines and removing the fuel and the control rod drive mechanisms.

The NRC proposes to add to its regulations language similar to the *Zimmer* decision to establish the criteria for when a facility licensed under 10 CFR part 50 or 10 CFR part 52 no longer meets the statutory or regulatory definition of a utilization or a production facility (i.e., is no longer capable of making use of special nuclear material or of the production of special nuclear material, separation of the isotopes of plutonium, or processing of irradiated materials containing special nuclear material (hereinafter collectively referred to as production-facility activities)). The first criterion is that the facility must not be legally authorized to operate. The second criterion is the physical modification of the licensed facility to be incapable of making use of special nuclear material and of production-facility activities, without significant facility alterations necessary to restore the capability to make use of special nuclear material or to engage in production-facility activities. When a utilization facility is physically modified to be incapable of making use of special nuclear material, it is no longer designed or used to sustain nuclear fission in a self-supporting chain reaction.

Sections 50.82(a)(2) and 52.110(b) already provide for the first criterion for power reactor licensees—that the facility is no longer legally authorized to operate. Sections 50.82(a)(2) and 52.110(b) state, respectively, that a 10 CFR part 50 license and a 10 CFR part 52 license no longer authorize operation of the reactor or emplacement or



retention of fuel into the reactor vessel once the NRC has docketed the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect. The NRC would amend these regulations to add the second criterion—that the facility licensed under 10 CFR part 50 or 10 CFR part 52 is no longer a utilization facility once the licensee modifies the facility to be incapable of making use of special nuclear material without significant facility alterations.

Because the NRC's regulations do not state when a non-power production or utilization facility or fuel reprocessing plant licensee is no longer authorized to operate (other than at license termination), the NRC proposes to amend § 50.82(b) to add the criteria for when a non-power production or utilization facility or fuel reprocessing plant is no longer a production or utilization facility. The NRC would renumber current paragraph (b)(6) in § 50.82 as paragraph (b)(8) and add new paragraphs (b)(6) and (b)(7). New paragraph (b)(6) would provide that a non-power production or utilization facility or fuel reprocessing plant is not legally capable of operating when the NRC removes the licensee's authority to operate the facility through a license amendment. The NRC can remove a non-power production or utilization facility or fuel reprocessing plant licensee's authority to operate by issuing a possession-only license amendment or by approving the licensee's decommissioning plan through a license amendment, either of which would explicitly remove the licensee's authority to operate. Licensees typically request a possession-only license amendment first and then submit a decommissioning plan via a second license amendment request. This proposed rule would offer licensees the option to request only one licensing action—the decommissioning plan license amendment—that also would address the licensee's operating authority, rendering a separate "possession-only license amendment" unnecessary. To address those



instances when the licensee is still operating the facility when the licensee submits its decommissioning plan license amendment request, the decommissioning plan license amendment would itself identify the date on which the authority to operate is removed.

The NRC would also include in new § 50.82(b)(6) the second criterion for when the non-power production or utilization facility or fuel reprocessing plant is no longer a production or a utilization facility (i.e., once the licensee modifies the facility to be incapable of production-facility activities and making use of special nuclear material without significant facility alterations).

The NRC would add new § 50.82(b)(7) and amend § 50.82(a)(2) and § 52.110(b) to affirm the continuation of the NRC's statutory authority over the existing 10 CFR part 50 or 10 CFR part 52 license after the performance of decommissioning activities that lead to the licensed facility no longer meeting the definition of a utilization or a production facility. This facility transition occurs with every licensee during decommissioning: eventually, the facility will be dismantled to the point where it is incapable of making use of special nuclear material or of production-facility activities without significant facility alterations.

Although the facility licensed under 10 CFR part 50 or 10 CFR part 52 may no longer be a utilization or a production facility, the NRC maintains the authority to regulate the existing 10 CFR part 50 or 52 license. A 10 CFR part 50 operating license for a production or utilization facility is issued under AEA sections 103 or 104, and a 10 CFR part 52 combined license for a utilization facility is issued under AEA sections 103 and 185b. That license may contain authorities beyond those governed by 10 CFR parts 50 or 52. Under § 50.52, "Combining licenses," the Commission may combine in a single license the activities that would otherwise be licensed under separate licenses.

Accordingly, a typical 10 CFR part 50 or 52 nuclear power reactor license also includes

in a single license the authority under 10 CFR parts 30, 40, and 70 of the NRC's regulations to perform activities or possess materials authorized by those parts. Parts 30, 40, and 70 of 10 CFR are authorized by sections 81, 63, and 53 of the AEA and concern the licensing of byproduct, source, and special nuclear materials, respectively. A typical 10 CFR part 50 non-power production or utilization facility license also includes the authority under 10 CFR parts 30 and 70 of the NRC's regulations to perform activities or possess materials authorized by those parts. When the facility is no longer a production or utilization facility, the NRC maintains the authority to regulate the facility and the 10 CFR part 50 or 52 license under a combination of AEA sections 53, 63, 81, and 161. Sections 50.51(b) and 52.109 of the NRC's regulations also establish that the 10 CFR part 50 or 52 license continues in effect until the NRC terminates the license, notwithstanding the fact that at some point in time during the dismantlement required for license termination, the licensed facility will be disassembled to such an extent that it no longer satisfies the definition of a utilization or a production facility. Therefore, the NRC would amend § 50.82(a)(2), § 50.82(b), and § 52.110(b) to explicitly cite these statutory provisions as the basis for its retention of the authority to regulate the existing 10 CFR parts 50 or 52 facility. The NRC proposes to make conforming changes to the authorities section of 10 CFR parts 50 and 52 to add sections 53, 63, and 81 of the AEA.

The NRC proposes to amend § 50.82(a)(2), § 50.82(b), and § 52.110(b) to state which requirements apply to the existing 10 CFR part 50 or 52 license after the licensed facility is no longer a utilization or a production facility. As provided by section 161b of the AEA, the Commission is authorized to establish by regulation such standards to govern the possession and use of special nuclear material, source material, and byproduct material as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or



property. Consistent with this statutory authority, the proposed amendments to § 50.82(a)(2), § 50.82(b), and § 52.110(b) will make clear that, after the facility licensed under 10 CFR part 50 or 52 is no longer a utilization or a production facility and until the termination of the 10 CFR part 50 license pursuant to § 50.82(a)(11) or § 50.82(b)(8) or the 10 CFR part 52 license pursuant to § 52.110(k), the NRC regulations applicable to utilization or production facilities will continue to apply to the holder of the 10 CFR part 50 or 10 CFR part 52 license, as applicable, unless those regulations explicitly state otherwise. These proposed amendments would enable a licensee to maintain reasonable assurance of adequate protection of the common defense and security and the public health and safety by requiring the licensee to continue to comply with those regulations applicable to utilization or production facilities, as applicable to that licensee, unless stated otherwise.

The NRC has identified that § 50.38 should not apply to a facility that is no longer a utilization or a production facility. Specifically, the AEA prohibits the issuance of a license for a utilization or a production facility to an entity that the Commission knows or has reason to believe is foreign owned, controlled, or dominated. However, the NRC regulations that implement this prohibition are unclear as to whether the prohibition also applies to the acquisition of a 10 CFR part 50 or 10 CFR part 52 license for a facility that is no longer a utilization or a production facility. Therefore, the NRC is proposing to amend § 50.38 such that its prohibition on transferring a license to an entity that the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, is not applicable if the license is a 10 CFR part 50 or 10 CFR part 52 license for a facility that no longer meets the definition of a utilization or a production facility.



Section 50.80 governs the transfers of 10 CFR part 50 and 10 CFR part 52 licenses. It requires the written consent of the NRC before the transfer of a 10 CFR part 50 or a 10 CFR part 52 license. This section also requires applicants for a license transfer to provide the same identifying, technical, and financial information that an initial license applicant is required to provide under §§ 50.33 and 50.34. In particular, § 50.33 requires an application to state the citizenship of the applicant. Under § 50.38, the applicant is ineligible to apply for and obtain a license if it is a foreign entity.

Section 50.38 implements sections 103 and 104 of the AEA, which provide in part that a license for a utilization or production facility may not be issued to an alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. Since sections 103 and 104 of the AEA apply to utilization and production facilities, the NRC is proposing to amend § 50.38 to clarify that this prohibition does not apply to a person, corporation, or other entity seeking a license for a facility that is no longer a utilization or a production facility, as would be provided under revised § 50.82(a)(2), § 50.82(b)(6), or § 52.110(b).

The proposed amendment to § 50.38 would maintain the common defense and security and the public health and safety because, even though § 50.38 would not prohibit the transfer to foreign entities of 10 CFR part 50 and 10 CFR part 52 licenses for facilities that do not meet the definition of utilization or production facility, other regulations ensure that such transfers would not be inimical to the common defense and security or to the public health and safety. For instance, § 50.80(c) states that the Commission will approve an application for the transfer of a license if the Commission determines that the proposed transferee is qualified to be the holder of the license and that the transfer of the license is otherwise consistent with applicable provisions of law,

regulations, and orders issued by the Commission. In turn, under § 50.57 or § 52.97, the Commission may issue a 10 CFR part 50 or 10 CFR part 52 license, respectively, only if the Commission finds that the issuance of the license will not be inimical to the common defense and security or to the public health and safety.

The proposed amendment to § 50.38 is consistent with exemptions from § 50.38 that the NRC granted in 2013 to the licensees for Maine Yankee Atomic Power Station, Haddam Neck Plant, and Yankee Nuclear Power Station (78 FR 58571; September 24, 2013). Specifically, the NRC granted those exemptions because the reactor facilities had been dismantled and removed such that only ISFSIs remained on site; an ISFSI, whether licensed under 10 CFR parts 50 or 72, is not capable of making use of special nuclear material; and the AEA definition of a utilization facility does not include ISFSIs. The NRC found that the foreign ownership, control, or domination prohibition did not apply to ISFSIs and, thus, did not preclude the NRC from granting the exemptions.

The NRC is also proposing to amend §§ 50.1, 50.51, 52.0, and 52.109 in light of the proposed amendments to §§ 50.38, 50.82, and 52.110. The proposed amendments would make clear that the regulations in 10 CFR part 50, and the similar regulations in 10 CFR part 52, provide not only for the licensing of utilization and production facilities, but also for their decommissioning and the termination of their associated licenses. These changes are clarifications; 10 CFR part 50 has included decommissioning and license termination since 1961 ("Creditors' Rights; and Transfer, Surrender, and Termination of Licenses," 26 FR 9546; October 10, 1961). The NRC proposes to delete the language in §§ 50.51 and 52.109 that discusses what 10 CFR parts 50 and 52 licenses authorize in lieu of the more complete discussion provided in the proposed amendments to § 50.82(a)(2), § 50.82(b)(6) and (7), and § 52.110(b).



The NRC is proposing to add a specific definition for "non-power production or utilization facility" to § 50.2 to establish a term that is flexible enough to capture all non-power facilities licensed under § 50.22, "Class 103 licensees; for commercial and industrial facilities," and § 50.21(a) or (c), except fuel reprocessing facilities. This proposed rule would address inconsistencies in definitions and terminology associated with non-power production and utilization facilities in § 50.2 that result in challenges in determining the applicability of the regulations. Fuel reprocessing plants would be excluded from the definition because the consequences associated with the hazards at a fuel reprocessing plant would likely exceed those anticipated at the facilities within the "non-power production or utilization facility" definition, thereby affecting the applicability of the "non-power production or utilization facility" term.

The only NRC-licensed fuel reprocessing plant is the West Valley Demonstration Project (WVDP). The technical specifications of the WVDP NRC license are currently suspended by license amendment. Under the West Valley Demonstration Project Act, Pub. L. No. 96-368, 94 Stat. 1347 (codified as a note to 42 U.S.C. § 2021a), the Department of Energy (DOE) is currently decommissioning portions of the plant. The NRC licensee, the New York State Energy Research and Development Authority, will complete the decommissioning work after DOE has completed its work under the WVDP Act. There is currently no application for another fuel reprocessing plant and the NRC does not anticipate any application in the foreseeable future.

The NRC proposes to revise the introductory text of § 50.82(b) to replace the term "non-power reactor licensees" with "non-power production or utilization facility licensees and fuel reprocessing plants" to ensure that all non-power facilities licensed under § 50.22 or § 50.21(a) or (c) are subject to the relevant termination and decommissioning regulations.



**N. Clarification of Scope of License Termination Plan Requirement**

The NRC is proposing to amend its regulations to clarify that the requirement for a license termination plan in § 50.82(a)(9) and § 52.110(i) applies only to power reactor licensees that commenced operation. This clarification is being proposed in response to apparent confusion among combined license holders that have sought to surrender their licenses before operation. By letter dated November 1, 2017 (ADAMS Accession No. ML17311A143), Duke Energy Florida informed the NRC that it would seek termination of the 10 CFR part 52 combined licenses for Levy Nuclear Plant Units 1 and 2 and would submit a license termination plan in accordance with § 52.110(i). Subsequently, South Carolina Electric & Gas Company (SCE&G) submitted a letter dated December 27, 2017 (ADAMS Accession No. ML17361A088), seeking withdrawal of the 10 CFR part 52 combined licenses for Virgil C. Summer Nuclear Station Units 2 and 3. The SCE&G request neither cited § 52.110 nor indicated that it would submit a license termination plan. Instead, SCE&G cited the Commission's final "Policy Statement on Deferred Plants" (52 FR 38077; October 14, 1987) (Policy Statement) to support its request for NRC approval to withdraw its combined licenses. The Policy Statement addresses holders of construction permits that defer or terminate plant construction. The Policy Statement provides that a permit holder can request to withdraw its permit and does not cite to the license termination provisions in 10 CFR part 50. The Policy Statement was issued prior to the promulgation of 10 CFR part 52 and has not been updated since, but there is nothing to prevent holders of a combined license from following the applicable parts of the Policy Statement while continuing to comply with the Commission's regulations and the terms and conditions of the combined license.

The requirement for a license termination plan in § 52.110(i) does not apply to plants that have not begun operating. While § 52.110(i) does refer to “[a]ll power reactor licensees,” the regulatory history and context indicates that § 52.110 as a whole applies only to plants that have started operation:

- The organization of § 52.110 generally follows the license termination process for an operating plant, from permanent cessation of operations to permanent removal of fuel to decommissioning activities to license termination. The requirement for a license termination plan should be understood in this context.

- The vast majority of the requirements in § 52.110 (including § 52.110(i)) either explicitly refer to, or make sense only in the context of, a plant that has operated and is undergoing decommissioning.

- The “[a]ll power reactor licensees” language also appears in § 50.82(a)(9), the 10 CFR part 50 analogue to § 52.110(i). But the NRC does not apply the similar requirements in § 50.82 to holders of construction permits even though construction permits fall within the definition of “License” in § 50.2. For example, the following construction permit terminations do not cite or otherwise address § 50.82: “Washington Public Power Supply System, Washington Nuclear Project, Unit 3; Order Revoking Construction Permit No. CPPR-154” (64 FR 4725; January 29, 1999); “Bellefonte Nuclear Plant, Units 1 and 2—Withdrawal of Construction Permit Nos. CPPR-122 for Unit 1 and CPPR-123 for Unit 2” (September 14, 2006) (ADAMS Accession No. ML061810505); and “Energy Northwest Nuclear Project No. 1—Termination of Construction Permit CPPR-134” (February 8, 2007) (ADAMS Accession No. ML070220011). And the rule issuing the “[a]ll power reactor licensees” language in § 50.82(a)(9)—the 1996 Final Rule—was directed at holders of operating licenses, not construction permits.

- According to the final rule issuing § 52.110, "Licenses, Certifications, and Approvals for Nuclear Power Plants" (72 FR 49351; August 28, 2007), § 52.110 and its companion regulation § 52.109 were intended to be analogous to the requirements in § 50.51 and § 50.82 for permanent shutdown of a nuclear power plant, its decommissioning, and the termination of the operating license.

For these reasons, § 52.110 is best understood to apply only to plants that began operation. However, to avoid confusion over the license termination plan requirement, the NRC proposes to amend § 52.110(i) so that it explicitly applies only to "power reactor licensees that commenced operation." As stated in the "Final Procedures for Conducting Hearings on Conformance With the Acceptance Criteria in Combined Licenses" (81 FR 43266; July 1, 2016), the NRC has historically understood operation as beginning with the loading of fuel into the reactor. Therefore, § 52.110(i) would apply to 10 CFR part 52 power reactor licensees that have begun to load fuel into the reactor.

A conforming change is also proposed in § 50.82(a)(9) to clarify that the requirement in that provision—that all 10 CFR part 50 power reactor licensees must submit an application for termination of license—applies to only those 10 CFR part 50 power reactor licensees that commenced operation.

## **V. Specific Requests for Comments**

The NRC is seeking advice and recommendations from the public on this proposed rule. The agency is particularly interested in comments and supporting rationale from the public on the following:

- Insurance for Specific License ISFSI: A 10 CFR part 50 or 10 CFR part 52 power reactor licensee with a 10 CFR part 72 general license ISFSI at the reactor site is subject to the financial protection requirements under 10 CFR part 140, whereas a



specific license ISFSI under 10 CFR part 72 is not. In SECY-04-0176, "Exemption Requests to Reduce Liability Insurance Coverage for Decommissioning Reactors after Transfer of all Spent Fuel from a Spent Fuel Pool to Dry Cask Storage," dated September 29, 2004 (ADAMS Accession No. ML040850518), the NRC staff noted that general license ISFSIs subject to the requirements under 10 CFR part 72 were also subject to the requirements of a 10 CFR part 50 license and by virtue of this license, they are required to maintain some level of liability insurance under section 170, "Indemnification and Limitation of Liability," of the AEA (known as the Price-Anderson Act) and the NRC's implementing regulations at 10 CFR part 140. Further, the NRC staff acknowledged that there was little technical difference between a general license ISFSI and a specific license ISFSI.

The NRC recognizes that as a reactor site is decommissioned, eventually all that remains of the 10 CFR part 50 or part 52 licensed site is a general license ISFSI under 10 CFR part 72, which is essentially the same as a specific license ISFSI under 10 CFR part 72. Considering that 10 CFR part 72 specific license ISFSIs have no financial protection requirements, should the NRC address the disparity between specific license and general license ISFSIs as a part of this rulemaking? Please provide an explanation for your response.

- Financial Protection Adjustments for Inflation: The reduced financial protection exemption amounts proposed in this rulemaking for Level 2 (\$100 million for offsite financial protection and \$50 million for onsite financial protection) were proposed in the 1990s and have not been adjusted for inflation. After almost 20 years, consideration should be given to adjusting these figures for inflation. If the NRC chooses to adjust these figures for inflation, subsequent inflation adjustments would be

made in 5 year increments to coincide with the Price-Anderson Act inflation adjustments required by Section 170t of the AEA.

In its SRM for SECY-93-127, "Financial Protection Required of Licensees of Large Nuclear Power plants during Decommissioning," dated July 13, 1993 (ADAMS Accession No. ML003760936), the Commission approved a policy to allow a licensee to withdraw from participation in the second insurance protection layer and reduce the amount of primary liability insurance coverage to \$100 million provided they met a certain technical criterion (i.e., the spent fuel cooling standard). Therefore, in calculating an adjustment for inflation to the offsite and onsite financial protection values of \$100 million and \$50 million, respectively, the NRC considered as its starting point July 1993 (the approval date of the \$100 million financial protection figure) and ending point to be July 2017. By adjusting for a 2.2 percent annualized rate of inflation during the 24-year and 4 month period between July 1993 and November 2017 (using the Consumer Price Index, Bureau of Labor Statistics data), the primary financial protection and onsite amounts would equate to approximately \$171 million and \$85 million, respectively, in July 2017 dollars.

As part of this rulemaking, should the NRC adjust the financial protection amounts proposed for Level 2 (\$100 million for offsite financial protection and \$50 million for onsite financial protection) for inflation and provide a mechanism to adjust these values periodically in 5-year increments to coincide with the Price-Anderson Act inflation adjustments required in Section 170t of the AEA? Please provide an explanation for your response.

- Recordkeeping Requirements for Facilities Licensed under 10 CFR Part 52:

The current appendices in 10 CFR part 52 contain section X, "Records and Reporting," for all of the certified designs codified in 10 CFR part 52. Section X requires, in part, that



all departures from the certified design be recorded and those records kept throughout the term of the license. However, as part of this rulemaking, the NRC is proposing to change the record retention requirements for power reactors in the decommissioning process such that they no longer need to retain certain records associated with SSCs that are no longer in service or necessary to keep the plant in a safe condition. The NRC is considering making conforming changes to section X of the applicable appendices to 10 CFR part 52 to allow this change to apply to records of departures from the certified design as well as the associated SSCs. Given the already existing change control procedures in the appendices to 10 CFR part 52, as well as the significant changes in recordkeeping technology since the NRC's record retention requirements were introduced (i.e., digital media instead of paper copies), should additional changes be made to the 10 CFR part 52 appendices as a part of this rulemaking, and would such changes be beneficial to 10 CFR part 52 licensees or add efficiency to the decommissioning process for these facilities? Please provide an explanation for your response.

- Identical Requirements under § 50.82 and § 52.110: As part of this rulemaking, the NRC proposes to revise § 52.110 to make the same changes proposed in § 50.82 for the reasons previously discussed and for consistency. The NRC also proposes to add paragraphs (h)(5) through (h)(7) to § 52.110 with site-specific decommissioning cost estimate reporting requirements that are identical to the requirements in § 50.82(a)(8)(v) through (vii). Given that the decommissioning financial assurance requirements in § 52.110 are identical to the requirements in § 50.82, should the NRC consider removing the specific requirements from § 52.110(f)–(h) and instead adding a reference in § 52.110 to the identical regulations in § 50.82(a)(6)–(8)? Are there any other provisions in § 52.110 that the NRC should consider removing and



replacing with a reference to an identical requirement in § 50.82 (e.g., the decommissioning requirements under § 52.110(c)–(e))? Please provide an explanation for your response.

## **VI. Section-by-Section Analysis**

The following paragraphs describe the specific changes proposed by this rulemaking.

### **Appendix G to 10 CFR Part 20, Requirements for Transfers of Low-Level Radioactive Waste Intended for Disposal at Licensed Land Disposal Facilities and Manifests.**

In section III, paragraph E.1., this proposed rule would remove the word “or” and add in its place the word “of” and it would also remove the phrase “20 days”, and add in its place the phrase “45 days”.

#### **Section 26.3 Scope.**

In § 26.3, this proposed rule would revise paragraph (a) by subdividing it into two subparagraphs, (a)(1) and (2), to include the NRC’s docketing of a license holder’s certifications required under §§ 50.82 and 52.110(a).

#### **Section 26.825 Criminal penalties.**

In § 26.825, this proposed rule would revise paragraph (b) to remove the number “26.3” from the list of regulations in 10 CFR part 26 that are excluded from § 26.825(a).

**Section 50.1 Basis, purpose, and procedures applicable.**

In § 50.1, this proposed rule would add language clarifying that the regulations in 10 CFR part 50 provide for the licensing of production and utilization facilities through the termination of the associated 10 CFR part 50 licenses.

**Section 50.2 Definitions.**

In § 50.2, this proposed rule would retain the existing definition of *certified fuel handler* and add an alternative definition for the purposes explained elsewhere in this document. This proposed rule also would add a definition for a *non-power production or utilization facility*.

**Section 50.4 Written communications.**

In § 50.4, this proposed rule would revise paragraph (b)(9) to require a licensee to state the date of permanent cessation of operations as well as the date on which the fuel was removed from the reactor.

**Section 50.38 Ineligibility of certain applicants.**

This proposed rule would revise § 50.38 by including the current text as paragraph (a) and by adding paragraph (b) to state that the prohibition in paragraph (a) of this section does not apply to a person, corporation, or other entity seeking a license for a facility that is not a production or utilization facility.

**Section 50.47 Emergency plans.**

This proposed rule would make conforming changes to paragraph (b) in § 50.47 and would add paragraph (f) denoting when the planning standards in paragraph (b) of this section do not apply.

**Section 50.51 Continuation of license.**

In § 50.51, this proposed rule would remove the phrase, “to authorize ownership and possession of the production or utilization facility,” for reasons discussed elsewhere in this document.

**Section 50.54 Conditions of licenses.**

In § 50.54, this proposed rule would revise footnote 2 to the table in paragraph (m)(2)(i) to indicate when a Shift Technical Advisor is not required; it would revise paragraph (p) to include the definitions for *change* and *decrease in the safeguards effectiveness* for use in paragraph (p), would revise and redesignate existing paragraphs (p)(1) and (2) as (p)(2) and (3), and would redesignate paragraphs (p)(3) and (4) as paragraphs (p)(5) and (6) and would add new paragraphs (p)(1) and (4).

This proposed rule would revise: paragraph (q)(1) to clarify that the definitions are for use in paragraph (q), paragraph (q)(1)(iii) to remove the reference to appendix E to 10 CFR part 50, paragraph (q)(2) to add clarification to the applicability, paragraph (q)(3) to add applicable emergency planning requirements, paragraphs (q)(4) and (5) to remove the phrase “after February 21, 2012,” and add new paragraphs (q)(7) and (8) to add the requirements for licensees after the NRC docket their certifications required for decommissioning under § 50.82(a)(1) or § 52.110(a).

Paragraph (s)(2)(ii) would be revised by removing the phrase “after April 1, 1981,” and paragraph (s)(3) would be revised by adding clarification at the beginning of



the sentence that if the standards apply to offsite radiological response plans then the NRC will base its findings on a review of FEMA findings and determinations.

Paragraph (t) would be revised by replacing "." with "or" in the second sentence of paragraph (t)(1)(ii), adding new subparagraph (t)(1)(iii) to clarify the interval at which the licensee's emergency preparedness plan must be reviewed after the NRC has docketed the certifications required for decommissioning, and by adding new paragraph (t)(3) to state that the review requirement is no longer required once all fuel is in dry cask storage.

Paragraph (w) would be revised by adding new paragraphs (w)(5) and (6) to include the financial protection requirements for production or utilization facilities undergoing decommissioning.

Paragraph (bb) would be revised by restructuring the paragraph and revising the requirements of an irradiated fuel management plan.

#### **Section 50.59 Changes, tests, and experiments.**

In § 50.59, this proposed rule would revise paragraph (d)(3) to include the exception for when the records of changes requirement in paragraph (d)(3) applies.

#### **Section 50.71 Maintenance of records, making of reports.**

In § 50.71, this proposed rule would revise paragraph (c) by including the current text as paragraph (c)(1) and it would add new paragraph (c)(2) to add records requirements for licensees for whom the NRC has docketed the certifications required for decommissioning.

**Section 50.75 Reporting and recordkeeping for decommissioning planning.**

In § 50.75, this proposed rule would revise paragraph (a) by clarifying the availability of funds to decommission a facility as defined in § 50.2.

Paragraph (b)(1) would be revised by replacing “financial” with “reasonable” assurance and other conforming changes; paragraph (b)(3) would be revised by removing the phrase “as acceptable to the NRC” from the end of the paragraph; paragraph (b)(4) would be revised to include a site-specific decommissioning cost estimate and the second sentence of current paragraph (b)(4) would be moved to become a new paragraph (b)(5).

Paragraph (e)(1) would be revised to include the term “reasonable” financial assurance and paragraphs (e)(1)(i) and (ii) would be revised to include the description of “decommissioning cost” before the word estimate throughout each paragraph.

Paragraph (f) would be amended by revising (f)(1) to include the requirement for a report to include information regarding any potential decommissioning shortfall, it would be further amended by removing paragraph (f)(2) and redesignating (f)(3) through (5) as (f)(2) through (4) with minor revisions.

Paragraphs (h)(1)(iii) and (iv) and (h)(2) would be revised to remove the reference to three office directors within the NRC for the submission of written notice of the intention to make a payment or disbursement of funds and replace it with the Document Control Desk.

**Section 50.82 Termination of license.**

In § 50.82, this proposed rule would revise paragraph (a)(2) to provide clarification as to when a licensed nuclear power reactor is no longer considered to be a utilization facility. It also would revise paragraph (a)(4)(i) to clarify that licensees provide

the basis for whether the environmental impacts from site-specific decommissioning activities are bounded by federally issued environmental review documents. The phrase "including the projected cost of managing irradiated fuel" would be removed at the end of the last sentence. Paragraph (a)(4)(ii) would be revised to include the requirement for the NRC to include the irradiated fuel management plan in the notice of the receipt of the PSDAR in the *Federal Register* and to allow the public to comment.

Paragraph (a)(6)(ii) would be revised to provide clarification.

Paragraph (a)(8)(i)(A) would be revised to remove the words "legitimate decommissioning," and paragraph (a)(8)(ii) would be revised to clarify paragraphs (b) and (c) to § 50.75 are where the specified amounts are located.

Paragraph (a)(8)(v) would be revised to spell out the acronym DCE, decommissioning cost estimate, and to include the ability for the licensee to combine the reporting requirements of 10 CFR part 72 and § 50.82(a)(8)(vii).

Paragraph (a)(8)(vii) would be revised to spell out the acronym DCE, decommissioning cost estimate.

Paragraph (a)(8)(viii) would be added to allow licensees to use decommissioning trust funds for spent fuel management and for specific license ISFSI decommissioning expenses provided that 3 conditions are met.

Paragraph (a)(9) would be revised to clarify that all power reactors that commenced operation must submit an application for termination of a license and paragraph (a)(9)(ii)(F) would be revised to include the requirement to identify funding sources for license termination, spent fuel management, and ISFSI decommissioning.

The introductory text of paragraph (b) would be revised to replace the term "non-power reactor licensees" with "non-power production or utilization facilities and fuel reprocessing plants."



Paragraph (b)(6) would be redesignated as (b)(8) and new paragraphs (b)(6) and (7) would be added to include the criteria for when a non-power production or utilization facility or fuel reprocessing plant licensed under 10 CFR part 50 is no longer considered a production or utilization facility.

**Section 50.109 Backfitting.**

This proposed rule would revise § 50.109 in its entirety to provide backfitting provisions for reactors both before and during decommissioning and to include Commission direction from COMSECY-16-0020 that a documented evaluation required for a modification necessary to bring a facility into compliance with a license or the rules or orders of the Commission, or into conformance with the licensee's written commitments, must include a consideration of the costs of imposing the modification.

**Section 50.200 Power reactor decommissioning emergency plans.**

This proposed rule would add new § 50.200 that would contain the emergency preparedness requirements for power reactor facilities in decommissioning.

**Appendix A to 10 CFR Part 50, General Design Criteria for Nuclear Power Plants.**

This proposed rule would revise Criterion 1 in section I. Overall Requirements in appendix A to 10 CFR part 50 by revising the last sentence regarding the records to be maintained by the licensee regarding SSCs until the NRC docket the certifications required for decommissioning.

**Appendix E to 10 CFR Part 50, Emergency Planning and Preparedness for Production and Utilization Facilities.**

This proposed rule would revise section I. Introduction of appendix E to 10 CFR part 50 by removing paragraph 6.

Section IV. Content of Emergency Plans of appendix E to 10 CFR part 50 would be revised by removing from paragraph 4 the phrases "of the later of the date" and "or December 23, 2011," from the first sentence; new paragraph 8 would be added to inform licensees that the requirements of paragraphs 4, 5, and 6 of this section are no longer required once the NRC docket the licensee's certifications required for decommissioning; paragraphs A.7., A.9., B.1., C.2., E.8.c., and I. would all be revised by removing the "by date" phrases; paragraph D.4. would be removed; the last sentence of paragraph E.8.d. would be removed; in paragraph F.2.d., the end of the 3<sup>rd</sup> sentence beginning with the word "and" would be removed; in paragraph F.2.j, the third sentence from the end would be removed; and new paragraph F.2.k would be added to require licensees to follow the biennial exercise requirements in either paragraph F.2 of appendix E to 10 CFR part 50 or § 50.200(c) after the NRC docket the certifications required for decommissioning.

This proposed rule would revise section VI. Emergency Response Data System of appendix E to 10 CFR part 50 by removing the date in paragraph 4.a. and the date in paragraph 4.d., also in paragraph 4.d. it would remove the phrase ", whichever comes later" from the first sentence.

**Section 51.53 Postconstruction environmental reports.**

This proposed rule would revise paragraph (d) to remove the first sentence and to add references to § 52.110 or a decommissioning plan under § 50.82 of this chapter.

**Section 51.95 Postconstruction environmental impact statements.**

This proposed rule would revise paragraph (d) to refer to the license termination plan under § 50.82 or § 52.110 or a decommissioning plan under § 50.82.

**Section 52.0 Scope.**

In § 52.0, this proposed rule would add language clarifying that the regulations in 10 CFR part 52 remain effective through the termination of the associated 10 CFR part 52 licenses.

**Section 52.3 Written communications.**

This proposed rule would revise paragraph (b)(9) to require a licensee to state the date of permanent cessation of operations and the date on which the fuel was removed from the reactor.

**Section 52.63 Finality of standard design certifications.**

This proposed rule would revise paragraph (b)(2) by removing the last sentence and by adding new paragraphs (b)(2)(i) and (ii) regarding the recordkeeping and retention requirements for departures from the design of a facility.

**Section 52.109 Continuation of combined license.**

In § 52.109, this proposed rule would remove the phrase, "to authorize ownership and possession of the production or utilization facility," for reasons discussed elsewhere in this document.



**Section 52.110 Termination of license.**

This proposed rule would revise paragraph (b) as paragraph (b)(1) and would add paragraph (b)(2) to provide clarification as to when a facility licensed under 10 CFR part 52 is no longer considered to be a production or utilization facility. Paragraph (d)(1) would be revised to clarify that licensees provide the basis for whether the environmental impacts from site-specific decommissioning activities are bounded by federally issued environmental review documents, and the phrase "site-specific decommissioning cost estimate" would be added at the end of the last sentence. Paragraph (d)(2) would be revised to include the requirement for the NRC to include the irradiated fuel management plan in the notice of the receipt of the PSDAR in the *Federal Register* and to allow the public to comment.

Paragraph (f)(2) would be revised to clarify the decommissioning activities a licensee shall not perform. Paragraph (h)(1)(i) would be revised to remove the phrase "legitimate decommissioning," paragraph (h)(2) would be revised to include a more specific regulatory reference, and paragraphs (h)(5) through (8) would be added with requirements for the submission of financial status reports and use of § 50.75 decommissioning trust funds for spent fuel management and 10 CFR part 72 specific license ISFSI decommissioning expenses. Paragraph (i) would be revised to clarify that all power reactor licensees that commenced operation must submit an application for termination of a license. Paragraph (i)(2)(vi) would be revised to include identification of sources of funds for license termination, spent fuel management, and ISFSI decommissioning, as applicable.

**Section 72.13 Applicability.**

This proposed rule would revise § 72.13 by adding a new paragraph (e) to incorporate conforming changes to match technical changes elsewhere in the rule.

**Section 72.30 Financial assurance and recordkeeping for decommissioning.**

This proposed rule would revise § 72.30 by removing the second sentence in paragraph (c). The proposed revisions would create new paragraphs (b)(1)–(3) and redesignate the existing paragraphs (b)(1)–(6) as new (b)(3)(i)–(vi).

**Section 72.32 Emergency Plan.**

In § 72.32, this proposed rule would clarify that the requirement for having an emergency plan applies when the proposed ISFSI would not be located on the site or within the exclusion area of a nuclear power reactor licensed under 10 CFR parts 50 or 52. The proposed revisions would consolidate the current language and remove redundancies by using standardized language consistent with other proposed rule provisions.

**Section 72.72 Material balance, inventory, and records requirements for stored materials.**

This proposed rule would revise paragraph (d) by breaking it into 3 paragraphs. The last sentence of the current paragraph (d) would become paragraph (d)(3). New text is proposed for paragraph (d)(2) and minor revisions are proposed for paragraph (d)(1).

**Section 72.212 Conditions of general license issued under § 72.210.**

This proposed rule would revise § 72.212 by adding new paragraphs (b)(9)(vii)(A) and (B) regarding the protection of spent fuel after the NRC docket the decommissioning certifications. Paragraph (b)(9)(vii)(A) would allow a licensee to voluntarily provide for physical protection of the spent fuel under Subpart H of this part and § 73.51 of this chapter. Paragraph (b)(9)(vii)(B) would require a licensee who elects to provide physical protection under Subpart H of this part and § 73.51 of this chapter to notify the NRC of this decision using the provisions of § 50.54(p)(2).

**Section 72.218 Termination of license.**

This proposed rule would revise § 72.218 by revising paragraphs (a) and (b) and removing paragraph (c). Paragraph (a) is revised to reference the decommissioning requirements in § 50.82 or § 52.110 that apply to the general license and paragraph (b) is revised to state when the general license is considered terminated.

**Section 73.51 Requirements for the physical protection of stored spent nuclear fuel and high-level radioactive waste.**

This proposed rule would revise § 73.51 by removing text from paragraph (a), (a)(1), (a)(2), and adding new paragraph (a)(3). Paragraph (a)(3) would be added to require notification to the NRC under the provisions of § 72.212(b)(9)(vii) of this chapter by a licensee who elects to provide physical protection under Subpart H of 10 CFR part 72.



**Section 73.54 Protection of digital computer and communications systems and networks.**

This proposed rule would revise § 73.54 by removing the introductory text of the section and revising the introductory text of paragraphs (a), (b), and (c), and adding new paragraphs (i), and (j). The introductory text of paragraph (a) would be revised to capture that the rule applies during operation and decommissioning. Minor edits would be made to paragraphs (b) and (c). Paragraph (i) states that the requirements of § 73.54 no longer apply once the criteria in (i)(1) and (2) are met. Paragraph (j) provides for the removal of the cyber security license condition.

**Section 73.55 Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage.**

This proposed rule would revise § 73.55 by clarifying in paragraph (b)(3) that a licensee's physical protection program must be designed to prevent significant core damage until the NRC docket the certifications required for decommissioning.

New paragraphs (b)(9)(ii)(B)(1), (2), (2)(i), and (2)(ii) would be added to provide additional clarification for licensees implementing fitness for duty programs.

Paragraph (c)(6) would be revised by replacing the text beginning with the words "that describes" through the end of the sentence with the phrase, "in accordance with the requirements of § 73.54 of this part."

Paragraph (e)(9)(v)(A) would be revised to provide clarification for when the reactor control room would not be considered a vital area.

Paragraph (j)(4)(ii) would be revised to include a system for communication with certified fuel handlers if the NRC had docketed the certifications required for decommissioning.

Paragraph (p)(1)(i) and (ii) would be revised to allow a certified fuel handler or a licensed senior operator to approve the suspension of security measures if the NRC has docketed the certifications required for decommissioning.

**Section 140.11 Amounts of financial protection required for certain reactors.**

This proposed rule would revise § 140.11 by adding new paragraphs (a)(5), (a)(5)(i) and (ii) and by redesignating paragraph (b) as paragraph (c) and adding new paragraph (b) that would provide the requirements for the amounts of financial protection required for reactors in decommissioning.

**Section 140.81 Scope and purpose.**

This proposed rule would revise § 140.81 by clarifying the scope of who is subject to the requirements in this section and to further clarify that this section no longer applies once a licensee meets the requirements of § 140.11(a)(5)(i) and (ii).

**VII. Regulatory Flexibility Certification**

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this rule, if adopted, will not have a significant economic impact on a substantial number of small entities. This proposed rule affects only the licensing and operation of nuclear power plants. The companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the size standards established by the NRC (§ 2.810).

## **VIII. Regulatory Analysis**

The NRC has prepared a draft regulatory analysis for this proposed rule. The analysis examines the costs and benefits of the alternatives considered by the NRC. The NRC requests public comment on the draft regulatory analysis. The draft regulatory analysis is available as indicated in the *"Availability of Documents"* section of this document. Comments on the draft analysis may be submitted to the NRC as indicated under the ADDRESSES section of this document.

## **IX. Backfitting and Issue Finality**

The NRC's backfitting provisions for holders of construction permits and operating licenses appear in § 50.109, "Backfitting" (the Backfit Rule). Issue finality provisions (analogous to the backfitting provisions in § 50.109) for applicants and holders of combined licenses are located in § 52.83, "Finality of referenced NRC approvals; partial initial decision on site suitability," and § 52.98, "Finality of combined licenses; information requests." This section describes the backfitting and issue finality implications of the draft guidance documents described in section XVI, *"Availability of Guidance,"* in this document and this proposed rule as applied to applicants and holders of pertinent NRC approvals.

### **A. Current and Future Applicants**

Applicants and potential applicants (for licenses, permits, and regulatory approvals such as design certifications) are not, with certain exceptions, the subject of either the Backfit Rule or any issue finality provisions under 10 CFR part 52. Neither the Backfit Rule nor the issue finality provisions under 10 CFR part 52—with certain exclusions discussed below—were intended to apply to every NRC action that



substantially changes the expectations of current and future applicants, and applicants have no reasonable expectation that future requirements will not change ("Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants; Final Rule," 54 FR 15372, at 15385-15386; April 18, 1989).

The exceptions to this general principle are applicable whenever a combined license applicant references a 10 CFR part 52 license (e.g., an early site permit) or NRC regulatory approval (e.g., a design certification rule) with specified issue finality provisions. The issues that are resolved in an early site permit or a design certification and accorded issue finality do not include decommissioning matters that are the subject of this proposed rule and draft guidance, and the proposed rule and draft guidance do not contain design requirements. Therefore, the proposed rule and draft guidance would not be inconsistent with the issue finality provisions applicable to early site permits and design certifications. For the same reasons, the issue finality provision applicable to combined license applicants (§ 52.83) would not apply to a combined license applicant referencing either an early site permit or a design certification with respect to compliance with this rule.

#### **B. Existing Design Certifications**

The issues that are resolved in a design certification and accorded issue finality do not include decommissioning matters that are the subject of this proposed rule and draft guidance. Because the decommissioning matters that are the subject of this proposed rule and draft guidance are limited to power reactor decommissioning, they would not be applied to existing or future design certifications.

### C. Existing Licensees

Most of the power reactor licensees transitioning to decommissioning have historically requested exemptions from the same requirements. These requirements are typically in the areas of emergency preparedness, physical security, decommissioning funding, record retention, low-level waste transportation, and offsite and onsite financial protection and indemnity agreements. In approving these exemption requests, the NRC has imposed almost identical regulatory frameworks on each decommissioning licensee. To the extent that this proposed rule would make generically applicable a set of requirements similar to the regulatory relief provided to these individual licensees through these exemptions, the proposed rule, as applied to these licensees, would not constitute backfitting under § 50.109.

In addition to amendments that reflect the regulatory relief provided by exemptions, the proposed rule includes certain regulations that would provide an alternative set of requirements for any power reactor licensee during decommissioning. Because these optional requirements would not be imposed upon licensees and would not prohibit licensees from following existing requirements, the proposed requirements would not constitute backfitting or a violation of issue finality.

Several proposed amendments involve recordkeeping and reporting requirements, which do not fall within the purview of the Backfit Rule and issue finality regulations. See, e.g. "Reporting Requirements for Nuclear Power Reactors and Independent Spent Fuel Storage Installations at Power Reactor Sites; Final Rule," 65 FR 63769, October 25, 2000. The remaining proposed changes would not meet the definition of "backfitting" in 10 CFR 50.109 or constitute violations of issue finality because they would be edits to existing regulations without a direct link to radiological

public health and safety or common defense and security, such as the process to change a licensee's security plan; edits to existing requirements for the NRC; or edits to existing regulations to clarify the language of the regulations without imposing new or different requirements.

One aspect of this proposed rule would constitute a violation of issue finality for existing licensees; that issue is described in the next section.

#### **D. Backfit Analysis**

##### **1. Introduction and Background**

As part of this proposed rule, the NRC is proposing a modification to the cyber security requirements in § 73.54. This proposed rule would ensure that these requirements continue to apply to power reactor licensees that have submitted their § 50.82(a)(1) or § 52.110(a) certifications until such time that all spent fuel in the SFP has sufficiently decayed (i.e., at least 10 months for BWRs and 16 months for PWRs after the date of permanent cessation of operations, or an NRC-approved alternative spent fuel decay period).

This amendment would likely constitute a violation of issue finality for 10 CFR part 52 COL holders, as defined in § 52.98. These licensees are not currently required to maintain their cyber security programs past the date that they are no longer authorized to operate the reactor. If the proposal to require these licensees to maintain their cyber security program into the decommissioning phase would extend the duration that a COL holder would be required to maintain a cyber security program, then that extension would constitute a new or changed requirement for that licensee and, thus, violate that COL's issue finality.



## 2. Detailed Description of the Proposed Violation of Issue Finality

The NRC sets forth the current cyber security requirements for power reactors in § 73.54. The NRC established these requirements as part of the 2009 final rule, "Power Reactor Security Requirements" (74 FR 13926, March 27, 2009) (2009 Final Rule). The preamble to § 73.54 states, in part, that by November 23, 2009, each nuclear power reactor licensee "currently licensed to operate" must submit to the NRC a cyber security plan (CSP) for review and approval. The preamble further states that the requirements in § 73.54 are applicable to current "applicants for an operating license or combined license" and mandates such applicants to amend their applications to include a CSP. In addition, every 10 CFR part 50 license for a nuclear power reactor that was operating in 2009 contains a license condition to have and maintain a Commission-approved CSP. These license conditions were issued when the NRC approved each licensee's CSP that was submitted to the NRC as required by the 2009 Final Rule. The Tennessee Valley Authority's 10 CFR part 50 operating license for Watts Bar Nuclear Plant, Unit 2, issued in 2015, also contains a license condition to have and maintain a CSP.

As an initial step in the decommissioning process, a nuclear power reactor licensee must submit written certifications that it has decided to permanently cease operations and has permanently removed all fuel from its reactor vessel, in accordance with § 50.82(a)(1)(i) and (ii) for power reactor licensees under 10 CFR part 50, or § 52.110(a)(1) and (2) for 10 CFR part 52 combined license holders. As stated in § 50.82(a)(2) and § 52.110(b), upon the NRC's docketing of these certifications, the license no longer authorizes operation of the reactor or the placement or retention of fuel in the reactor vessel. In a December 5, 2016 memorandum to the Commission,<sup>7</sup> the

---

<sup>7</sup> Memorandum, "Cyber Security Requirements for Decommissioning Nuclear Power Plants," dated December 5, 2016 (ADAMS Accession No. ML16172A284).

NRC staff explained that § 73.54 no longer applies to power reactor licensees once they have submitted, and the NRC has docketed, these certifications.

As discussed in the "*Technical Basis for Graded Approach*" section of this document, the NRC has concluded that after 10 months for BWRs and 16 months for PWRs, the spent fuel in the SFP will have decayed and cooled sufficiently such that the fuel cannot heat up to clad ignition temperature within 10 hours under adiabatic conditions. The NRC has determined that until the fuel has decayed and cooled sufficiently, power reactor licensees must maintain reasonable assurance that their critical digital assets remain protected against cyber attacks. As such, this proposed rule would modify the cyber security requirements in § 73.54 to ensure that they continue to apply to licensees of decommissioning power reactors until the spent fuel has decayed and cooled sufficiently (either through the application of a 10 month (BWR) or 16 month (PWR) decay period or an NRC-approved site-specific decay period). This proposed rule would also remove the CSP license condition from the 10 CFR part 50 licenses at the applicable 10 or 16 month interval.

This proposed rule would not constitute backfitting for currently operating or recently shutdown 10 CFR part 50 reactor licensees. Their CSP license condition remains in effect until the termination of the license or the NRC removes the condition from the license (e.g., if the licensee submits a license amendment request and the NRC approves it). The NRC has determined that the requirements of the CSP license conditions are not necessary after the spent fuel in the SFP has sufficiently cooled. The proposed rule would codify, during Level 1 of decommissioning, the already-imposed requirements of the CSP license conditions. These requirements would continue to provide adequate protection of the public health and safety and common defense and security and continue to support the effective operation of licensees' security and



emergency preparedness programs during the time when a draindown scenario can credibly lead to a zirconium fire. (See sections 3 and 4 of this backfit analysis for additional cost/benefit discussion.) Therefore, this proposed rule would not impact these licensees' overall requirement to maintain a cyber security program, but would instead enable the automatic removal of cyber security requirements once fuel in the SFP has sufficiently cooled. Thus, the decommissioning rulemaking would not impose a new or changed requirement as the licensees are already implementing the requirement as part of their cyber security program license conditions.

Conversely, this rulemaking would constitute a violation of issue finality for 10 CFR part 52 COL holders. Each currently approved COL includes a license condition to provide the NRC with the licensee's Operational Program Implementation Schedule. The operational programs (which include development and implementation of a security program, including a cyber security program) are requirements in the regulations and not separately identified as license conditions. As a result, a COL does not require the licensee to maintain the cyber security program throughout the duration of its license. COL holders are currently required to maintain a program only as long as § 73.54 is applicable to them. Because § 73.54 no longer applies to the licensee once it is not authorized to operate a nuclear power reactor, and a power reactor licensee is not authorized to operate a nuclear power reactor during decommissioning, COL holders are not required to maintain their CSP during decommissioning. This proposed rule, which would require licensees to maintain their cyber security program for 10 months (BWR) or 16 months (PWR) beyond the date of permanent cessation of operations (or for an NRC-approved alternative spent fuel decay period) could extend the duration over which a COL holder would be required to maintain a cyber security program. That extension would constitute a new or changed requirement for that licensee.



Under § 52.98, the Commission cannot modify any term or condition of an issued combined license except in accordance with the provisions of § 52.103 or § 50.109, as applicable. This proposed rule's amendment of the cyber security requirements would violate the issue finality of the COLs issued at the time of the final rule's effective date. The provisions of § 52.103 do not apply to this proposed rule, so the NRC must show that the amendment would meet the requirements of § 50.109 to justify proceeding with this amendment. Because none of the exceptions to the requirement to prepare a backfit analysis in § 50.109(a)(4) applies to this rulemaking, § 50.109(a)(3) requires the NRC to prepare a backfit analysis that demonstrates that the proposed amendment would result in a substantial increase in the overall protection of the public health and safety or the common defense and security, and that the direct and indirect costs of implementation are justified in view of this increased protection.

### 3. Benefits: Substantial Increase in Public Health and Safety and Common Defense and Security

The NRC identified qualitative (non-quantifiable) benefits that would occur if the proposed violation of issue finality were implemented.

The NRC identified two qualitative benefits to the common defense and security and public health and safety that would be realized if the proposed rule is implemented. Specifically, the NRC finds that extending the duration over which the licensee must maintain cyber security requirements would:

- Constitute a substantial increase in protection to common defense and security by ensuring that a compromise of digital systems cannot adversely impact the effective operation of licensees' physical security programs; and

- Constitute a substantial increase in public health and safety by ensuring that a compromise of digital systems cannot adversely impact the effective operation of emergency preparedness systems in the event of a zirconium fire scenario.

### **Effective Operation of Physical Security Program**

The NRC has previously determined that attacks on the SFP are credible and have the potential to lead to an unacceptable impact to common defense and security.<sup>8</sup> Specifically, a physical attack by either an external force or malicious insiders could directly lead to a draindown scenario and subsequent zirconium fire.

As established in § 73.54, cyber security is an essential element of a licensee's physical security program that enables the licensee to effectively protect its site against the design basis threat of radiological sabotage defined in § 73.1, in accordance with § 73.55(b). Specifically, a physical attack that is augmented with a coincident cyber attack would, in many cases, have a higher chance of success over a purely physical attack.<sup>9</sup> Thus, although there is no cyber attack that can directly lead to a draindown scenario, a cyber attack can be combined with a physical attack on the SFP to improve the physical attack's likelihood of success.

Given a facility without adequate cyber security controls in place, several mechanisms exist that could improve the effectiveness of a physical attack on the SFP. For example, a cyber attack could aid a physical assault on the SFP by an external attacker by:

---

<sup>8</sup> NUREG/BR-0314, Rev. 4, "Protecting Our Nation" dated August 2015 (ADAMS Accession No. ML15232A263).

<sup>9</sup> "Risk assessment for physical and cyber attacks on critical infrastructures," Military Communications Conference, 2005. MILCOM 2005. Institute of Electrical and Electronics Engineers. October 2005.

- disabling perimeter detection to delay or prevent onsite response to the physical assault prior to the attacker gaining entry to the SFP
- disrupting onsite and offsite security-related communication to reduce the effectiveness of the licensee's response to the physical assault
- disabling access control doors and gates to enable the attacker expedited physical access to the SFP

In addition, inadequate cyber security controls on facilities' access control systems could enable an attacker to inject information into a licensee's access control system in a manner that would allow unauthorized individuals to obtain unescorted access into the protected or vital areas of the facility.<sup>10</sup> This could allow one or more attackers direct access to the SFP, which could then be exploited to sabotage the SFP in a manner that would result in a draindown scenario.

This factor, combined with the severity of the consequences of a draindown scenario and subsequent zirconium fire that could result from a successful physical attack, demonstrates that maintaining cyber security requirements during the period when a draindown scenario could reasonably result in a zirconium fire (i.e., prior to the fuel in the SFP sufficiently cooling) represents a substantial increase in security.

### **Effective Operation of Emergency Preparedness Systems**

As discussed in the *Technical Basis for the Graded Approach* and *Emergency Preparedness* sections of this document, although the spectrum of credible accidents and operational events requiring an emergency response is reduced at a decommissioning power reactor as compared to that for an operating power reactor,

---

<sup>10</sup> "SFAQ 17-04 Access Authorization / Access Authorization Systems," dated January 2018. Not publicly available.



reliable emergency preparedness functions are still required to ensure public health and safety in the event of a zirconium fire scenario.

As established in § 73.54, cyber security is an essential element of a licensee's physical security program that, in part, ensures that a compromise of digital systems cannot adversely impact emergency preparedness functions. For example, in the event of a zirconium fire scenario, the licensee's cyber security program prevents a cyber attack from adversely impacting the ability to<sup>11</sup>:

- Notify state, local, and Federal personnel of the emergency
- Request and communicate with offsite support
- Assess and classify the emergency conditions
- Disseminate information to the public during an emergency
- Conduct a radiological accident assessment

The NRC has determined that this factor demonstrates that maintaining cyber security requirements to ensure that a compromise of digital systems cannot adversely impact the operation of emergency preparedness functions until the time in which a SFP draindown would likely be mitigated prior to a zirconium fire scenario (i.e., once the fuel in the SFP has sufficiently cooled) represents a substantial increase in public health and safety.

#### 4. Costs

The NRC identified quantitative costs (i.e., costs that are amenable to quantitative evaluation) that would be incurred if the proposed violation of issue finality were implemented.

---

<sup>11</sup> NEI 10-04, Rev. 2, "Identifying Systems and Assets Subject to the Cyber Security Rule," issued July 2012 (ADAMS Accession No. ML12180A081).

Based on a review of feedback received during recent inspections of the full implementation of licensees' cyber security programs, the NRC estimates that the cost to implement a cyber security program for a decommissioning power reactor is approximately \$300,000 per site per year. As previously stated, this proposed violation of issue finality would extend the duration that a licensee must maintain its cyber security program for 10 (BWR) or 16 (PWR) months. Thus, the cost associated with this extension is approximately \$250,000 (BWR) or \$400,000 (PWR).

COLs have been issued at a total of 3 sites that utilize BWR units, and 4 sites that utilize PWR units. Assuming that all units are constructed and the per-site costs from the previous paragraph, the total cost associated with this proposed violation of issue finality if all reactors entered decommissioning today would be approximately \$2.35 million. If it is assumed that all sites with units licensed under 10 CFR part 52 decommission their reactors 40 years after the effective date of the final rule, with a discount rate of 7%, then the total, combined cost for all affected licensees associated with this proposed violation of issue finality would be approximately \$157,000. Due to the potential that some of these facilities may not be constructed or that some licensees may have voluntarily chosen to maintain their cyber security programs during this timeframe, this estimate is expected to be an upper bound.

##### 5. Determination of Substantial Benefits Justifying Costs of the Proposed Violation of Issue Finality

The NRC finds that the proposed violation of issue finality would provide a substantial increase in protection to public health and safety and common defense and security for current 10 CFR part 52 COL holders by ensuring that a compromise of digital systems cannot adversely impact the effective operation of licensees' security and

emergency preparedness programs during the time when a draindown scenario can credibly lead to a zirconium fire. The NRC finds that this substantial increase would justify the \$157,000 in costs that would accrue to the licensees.

#### 6. Conclusion

On the basis of this analysis, the NRC determines that the violation of issue finality resulting from the cyber security portion of this proposed rule would be justified under § 50.109(a)(3).

#### 7. Evaluation of Factors in § 50.109(c)(1) through (9)

In performing this analysis, the NRC considered the nine factors in § 50.109(c), as follows:

#### **Statement of the specific objectives that the backfit is designed to achieve;**

The two objectives for the cyber security portion of the "Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning" rulemaking are:

- To ensure the effectiveness of the physical protection program during the period over which a SFP draindown could realistically result in a zirconium fire scenario; and
- To ensure the effectiveness of emergency preparedness functions during the period over which a SFP draindown may not be mitigatable prior to the draindown resulting in a zirconium fire

Note that the violation of issue finality is only applicable to power reactors licensed under 10 CFR part 52 as of the effective date of the final rule.



**General description of the activity that will be required by the licensee or applicant in order to complete the backfit;**

The NRC is proposing a modification to the cyber security requirements in § 73.54 to ensure that these requirements continue to apply to licensees of decommissioning power reactors until such time that all spent fuel in the SFP has sufficiently decayed (i.e., 10 months for BWRs and 16 months for PWRs since the date of permanent cessation of operations, or an NRC-approved alternative spent fuel decay period). The violation of issue finality is only applicable to power reactors currently licensed under 10 CFR part 52 as of the effective date of the final rule.

**Potential change in the risk to the public from the accidental off-site release of radioactive material;**

The rulemaking is intended to reduce risk of offsite releases as a result of breaches in security at nuclear power plants, and to ensure the functionality of emergency preparedness functions in the case of a zirconium fire scenario. However, the reduction in risk to the public from offsite releases of radioactive materials has not been fully quantified because there is insufficient information and modeling to support such quantification.

**Potential impact on radiological exposure of facility employees;**

The rulemaking would provide added assurance that nuclear industry workers are not subjected to unnecessary radiological exposures as the result of a breach in security that causes a zirconium fire leading to a release of radiation that security personnel are exposed to as the result of their response activities. Further, the

rulemaking would ensure that emergency preparedness functions, including evacuation procedures, are not adversely impacted by a cyber attack during the period when a draindown scenario could reasonably result in a zirconium fire, thus ensuring that nuclear industry workers are not subjected to unnecessary radiological exposures in the case of a zirconium fire scenario.

**Installation and continuing costs associated with the backfit, including the cost of facility downtime or the cost of construction delay;**

The backfit analysis to support the violation of issue finality resulting from this proposed rule includes the NRC's estimate of the total costs for maintaining a licensee's cyber security program until the fuel in the SFP has sufficiently cooled to adequately ensure that a SFP draindown does not result in a zirconium fire scenario. The estimated one-time industry net cost associated with the violation of issue finality would be approximately \$157,000.

**The potential safety impact of changes in plant or operational complexity, including the relationship to final and existing regulatory requirements;**

The cyber security portion of this proposed rule would not impose any requirements beyond those in place while the power reactor is operational. As such, this rule is not expected to have an effect on facility complexity.

**The estimated resource burden on the NRC associated with the backfit and the availability of such resources;**

The rulemaking may result in a minor increase in the expenditure of agency resources, due to the potential for cyber security inspections to be conducted after the

licensee has ceased operations and before fuel in the SFP has sufficiently cooled.

**The potential impact of differences in facility type, design or age on the relevancy and practicality of the backfit;**

The specific cost of this rulemaking to a facility does vary, depending on whether the facility utilizes BWR or PWR reactors. This is due to time required for fuel in the SFP to sufficiently cool for each type of reactor. Further, since the violation of issue finality is only applicable to reactors licensed under 10 CFR part 52, the specific cost also depends on the percentage of reactors licensed under 10 CFR part 52 at the licensee's facility.

**Whether the backfit is interim or final and, if interim, the justification for imposing the backfit on an interim basis.**

The violation of issue finality would be final.

**E. Draft Regulatory Guidance**

As described in section XVI, "*Availability of Guidance*," in this document, the NRC is issuing four draft regulatory guides (DGs) that, if finalized, would provide guidance on the methods acceptable to the NRC for complying with aspects of this proposed rule. The DGs would apply to all current holders of operating licenses under 10 CFR part 50 and COLs under 10 CFR part 52. Issuance of the DGs in final form would not constitute backfitting under § 50.109 and would not otherwise violate issue finality under 10 CFR part 52. As discussed in the "Implementation" section of each DG, the NRC has no current intention to impose the DGs on current holders of an operating license or COL.



For the same reasons provided under “*Current and Future Applicants*” that explain why the proposed rule does not constitute backfitting or a violation of issue finality for applicants, applying the DGs to applications for operating licenses or COLs would not constitute backfitting as defined in § 50.109 and would not otherwise violate issue finality under 10 CFR part 52

#### **X. Cumulative Effects of Regulation**

The NRC is following its Cumulative Effects of Regulation (CER) process by engaging extensively with external stakeholders throughout this rulemaking and related regulatory activities. Public involvement has included: (1) the publication of an ANPR for public comment (80 FR 72358) on November 19, 2015, to inform the NRC’s efforts in drafting a proposed rule regulatory basis to address issues associated with power reactor decommissioning; (2) holding a public meeting on December 9, 2015, to afford external stakeholders an opportunity to ask the NRC staff clarifying questions regarding the ANPR; (3) the publication of the draft regulatory basis for public comment (82 FR 13778) on March 15, 2017; (4) the publication of a preliminary draft of the regulatory analysis for public comment (82 FR 21481) on May 9, 2017; and (5) holding a public meeting on May 8–10, 2017, to facilitate public comments on the development of the final regulatory basis and regulatory analysis.

Another opportunity for comment is being provided to the public with this proposed rule. The NRC will be issuing the draft implementing guidance with this proposed rule to support more informed external stakeholder feedback. Further, the NRC will continue to hold public meetings throughout the rulemaking process. Section XVI, “*Availability of Guidance*,” of this document describes how the public can

access the draft implementing guidance for which the NRC seeks external stakeholder feedback.

Finally, the NRC is requesting CER feedback on the following questions:

1. In light of any current or projected CER challenges, does the proposed rule's effective date provide sufficient time to implement the new proposed requirements, including changes to programs, procedures, and facilities?
2. If CER challenges currently exist or are expected, what should be done to address them? For example, if more time is required for implementation of the new requirements, what period of time is sufficient?
3. Do other (NRC or other agency) regulatory actions (e.g., orders, generic communications, license amendment requests, inspection findings of a generic nature) influence the implementation of the proposed rule's requirements?
4. Are there unintended consequences? Does the proposed rule create conditions that would be contrary to the proposed rule's purpose and objectives? If so, what are the unintended consequences, and how should they be addressed?
5. Please comment on the NRC's cost and benefit estimates in the draft regulatory analysis that supports the proposed rule. The draft regulatory analysis is available as indicated in the "*Availability of Documents*" section of this document.

## **XI. Plain Writing**

The Plain Writing Act of 2010 (Pub. L. 111-274) requires Federal agencies to write documents in a clear, concise, and well-organized manner. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, "Plain Language in Government Writing," published June 10, 1998 (63

FR 31883). The NRC requests comment on this document with respect to the clarity and effectiveness of the language used.

## **XII. National Environmental Policy Act**

This proposed rule includes some actions that are of the types described in § 51.22(c). The NRC has previously determined that these types of actions do not have a significant impact on the environment and has categorically excluded them from the requirement to prepare an environmental analysis. Specifically, the NRC has determined that some amendments in this proposed rule are the types of actions described in the § 51.22(c) exclusions noted in Table 4. Accordingly, the NRC has not developed an environmental impact statement or an environmental assessment for these portions of the proposed rule.

**Table 4—Application of 10 CFR 51.22 Categorical Exclusions to the Proposed Requirements**

<b>Regulation</b>	<b>Applicable 10 CFR 51.22 paragraph</b>
10 CFR part 26	(c)(1), (c)(3)
10 CFR 50.2	(c)(2), (c)(3)
10 CFR 50.54(bb)	(c)(3)
10 CFR 50.59(d)	(c)(3)
10 CFR 50.71(c)	(c)(3)
10 CFR 50.75(f)	(c)(3)
Elimination of 10 CFR 50.75(f)(2)	(c)(2)
10 CFR 50.82(a)	(c)(2), (c)(3)
10 CFR 50.109	(c)(2)
10 CFR part 50, appendix A	(c)(3)
10 CFR part 20, appendix G	(c)(3)
10 CFR 51.53	(c)(3)
10 CFR 51.95	(c)(3)
10 CFR 52.63	(c)(3)



10 CFR 52.110	(c)(2)
10 CFR 72.72	(c)(3)
10 CFR 72.218	(c)(3)
10 CFR part 140	(c)(1)

### **Draft Finding of No Significant Impacts**

The NRC has prepared a draft environmental assessment (EA) for the portions of this proposed rule not categorically excluded under 10 CFR § 51.22. The draft EA is available in ADAMS at Accession No. ML18023B561. The NRC prepared the draft EA to determine environmental impacts of the proposed action: a rulemaking to update the NRC's regulations related to production and utilization facilities transitioning to decommissioning. Based on the draft EA, the NRC concludes that this proposed rule would not have significant environmental impacts because the changes would be administrative or procedural in nature and would have no nexus to the physical environment or would have not significant impact on the environment. Therefore, this proposed rule does not warrant preparation of an environmental impact statement. Accordingly, the NRC has determined that a finding of no significant impact (FONSI) is appropriate.

### **XIII. Paperwork Reduction Act**

This proposed rule contains new or amended collections of information subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-21). This proposed rule has been submitted to the Office of Management and Budget for review and approval of the information collections.

*Type of submission, new or revision:* Revision.

*The title of the information collection:* Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning, Proposed Rule.

*The form number if applicable:* Not applicable.

*How often the collection is required or requested:* Annually.

*Who will be required or asked to respond:* Production and utilization facility licensees.

*An estimate of the number of annual responses:* 104.

*The estimated number of annual respondents:* 23.

*An estimate of the total number of hours needed annually to comply with the information collection requirement or request:* -3,820.

*Abstract:* The proposed rule would result in changes in recordkeeping and reporting burden relative to existing rules by creating a regulatory framework for production and utilization facility licensees transitioning to decommissioning and amending existing regulations that relate to the decommissioning of production and utilization facilities. Decommissioning power reactor licensees and the NRC have expended substantial resources processing licensing actions for power reactors during their transition period to decommissioning status. Licensees that are currently

transitioning to decommissioning have been requesting NRC review and approval of licensing actions, informed by the low risk of an offsite radiological release posed by a decommissioning reactor. Specifically, the licensees are seeking NRC approval of exemptions and license amendments to revise requirements to reflect the reduced operations and risks posed by a permanently shutdown and defueled reactor. The proposed rule would, on balance, reduce the paperwork burden imposed on production and utilization facility licensees transitioning to decommissioning by establishing a graded approach to the requirements imposed on these facilities. A graded approach would adjust the level of analysis, documentation, and actions necessary to comply with safety requirements and criteria commensurate with several factors, including magnitude of any credible hazard involved, and the balance between radiological and non-radiological hazards as applicable to the level within the decommissioning process. The NRC expects that these proposed changes would enhance the efficiency of the decommissioning process, and reduce the overall burden on licensees.

The NRC is seeking public comment on the potential impact of the information collections contained in this proposed rule and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?
2. Is the estimate of the burden of the proposed information collection accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?



4. How can the burden of the proposed information collection on respondents be minimized, including the use of automated collection techniques or other forms of information technology?

A copy of the OMB clearance package and proposed rule is available in ADAMS under Accession No. ML18039A192 or may be viewed free of charge at the NRC's PDR, One White Flint North, 11555 Rockville Pike, Room O-1 F21, Rockville, MD 20852. You may obtain information and comment submissions related to the OMB clearance package by searching on <http://www.regulations.gov> under Docket ID NRC-2015-0070.

You may submit comments on any aspect of these proposed information collections, including suggestions for reducing the burden and on the above issues, by the following methods:

- **Federal rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2015-0070.

- **Mail comments to:** Information Services Branch, Office of the Chief Information Officer, Mail Stop: T-2 F43, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001 or to Brandon De Bruhl, Desk Officer, Office of Information and Regulatory Affairs (3150-0014, -0146, -0011, -0151, -0132, -0002, -0039), NEOB-10202, Office of Management and Budget, Washington, DC 20503; telephone: 202-395-0710, e-mail: [oir\\_submission@omb.eop.gov](mailto:oir_submission@omb.eop.gov).

Submit comments by **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Comments received after this date will be considered if it is practical to do so, but the NRC staff is able to ensure consideration only for comments received on or before this date.

#### Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

#### **XIV. Criminal Penalties**

For the purposes of Section 223 of the Atomic Energy Act of 1954, as amended (AEA), the NRC is issuing this proposed rule that would amend or add §§ 26.3, 50.47, 50.54, 50.59, 50.71, 50.75, 50.82, 50.200, 52.110, 72.30, 72.72, 72.212, 72.218, 73.51, 73.54, 73.55, 140.11, and 140.81 as well as appendix G to 10 CFR part 20, appendix A to 10 CFR part 50, and appendix E to 10 CFR part 50, under one or more of Sections 161b, 161i, or 161o of the AEA. Willful violations of these provisions would be subject to criminal enforcement. Criminal penalties as they apply to regulations in 10 CFR parts 20, 26, 50, 52, 72, 73 and 140 are discussed in §§ 20.2402, 26.825, 50.111, 52.303, 72.86, 73.81 and 140.89.

#### **XV. Voluntary Consensus Standards**

The National Technology Transfer and Advancement Act of 1995, Pub. L. 104-113, requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical. In this proposed rule, the NRC would revise regulations associated with decommissioning in 10 CFR parts 20, 26, 50, 51, 52, 72, 73, and 140. This action would not constitute the establishment of a standard that contains generally applicable requirements.

## **XVI. Availability of Guidance**

The NRC is issuing for comment four draft regulatory guides to support the implementation of the proposed requirements in this proposed rule, as well as to support other recommendations made in the supporting regulatory bases regarding areas where the decommissioning guidance could be improved or enhanced. You may access information and comment submissions related to the Draft Guides (DGs) by searching on <http://www.regulations.gov> under Docket ID NRC-2015-0070. You may submit comments on this draft guidance by the methods outlined in the ADDRESSES section of this document.

1. The DG-1346, "Emergency Planning for Decommissioning Nuclear Power Reactors" (ADAMS Accession No. ML17311B018), is a new regulatory guide.

2. The DG-1347, "Decommissioning of Nuclear Power Reactors," (ADAMS Accession No. ML17347A794), would be Revision 2 to the existing Regulatory Guide 1.184.

3. The DG-1348, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," (ADAMS Accession No. ML17348B485), would be Revision 2 to the existing Regulatory Guide 1.159.

4. The DG-1349, "Standard Format and Content for Post-Shutdown Decommissioning Activities Report," (ADAMS Accession No. ML17353A727), would be Revision 2 to the existing Regulatory Guide 1.185.